

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of DOTHAN TV LLC, licensee of full-power commercial television station WDFX-TV, Channel 33 in Ozark, Alabama, in support of its application for modification of Construction Permit LMS-0000182873, to specify a decrease in effective radiated power from the authorized 325 kW to 179 kW. No change in site location, antenna make/model or antenna height above average terrain from that authorized is proposed herein.

It is proposed to utilize the authorized (and currently licensed) Dielectric directional, horizontally-polarized slotted cylinder antenna, which is mounted at the 144.2-meter level of an existing 152.4-meter tower. Exhibit B is a map upon which the predicted service contours are plotted. As shown, the community of Ozark is completely encompassed by the newly proposed 48 dBu city-grade service contour. The licensed, authorized and proposed noise-limited service contours of WDFX-TV are plotted in Exhibit C. From this exhibit, it is clear that the proposed service contour fully covers that of the licensed facility, meaning no "loss area" will be created by grant of this proposal.

Elevation and azimuth pattern data for the currently licensed (and authorized) Dielectric TFU-28ETT-R 4C190 DC antenna are provided in Exhibit D. Exhibit E contains the summary results from a TVStudy interference study, which was conducted using a cell size of 2.0 kilometers and an increment spacing of 1.0 kilometer. It concludes that the proposed WDFX-TV facility meets the Commission's *de minimis* interference criteria to all co-channel and adjacent-channel post-repack full-power and Class A facilities.

A power density calculation appears as Exhibit F.

EXHIBIT A

Since no change in the overall height or location of the existing WDFX-TV tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1244456 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large "K" and "F" and a smaller "T" in the middle.

KEVIN T. FISHER

January 11, 2023

CONTOUR POPULATION
2020 U.S. CENSUS DATA
CITY-GRADE (43 DBU) : 298,786 (135,415 HH)
NOISE-LIMITED : 344,440 (156,363 HH)

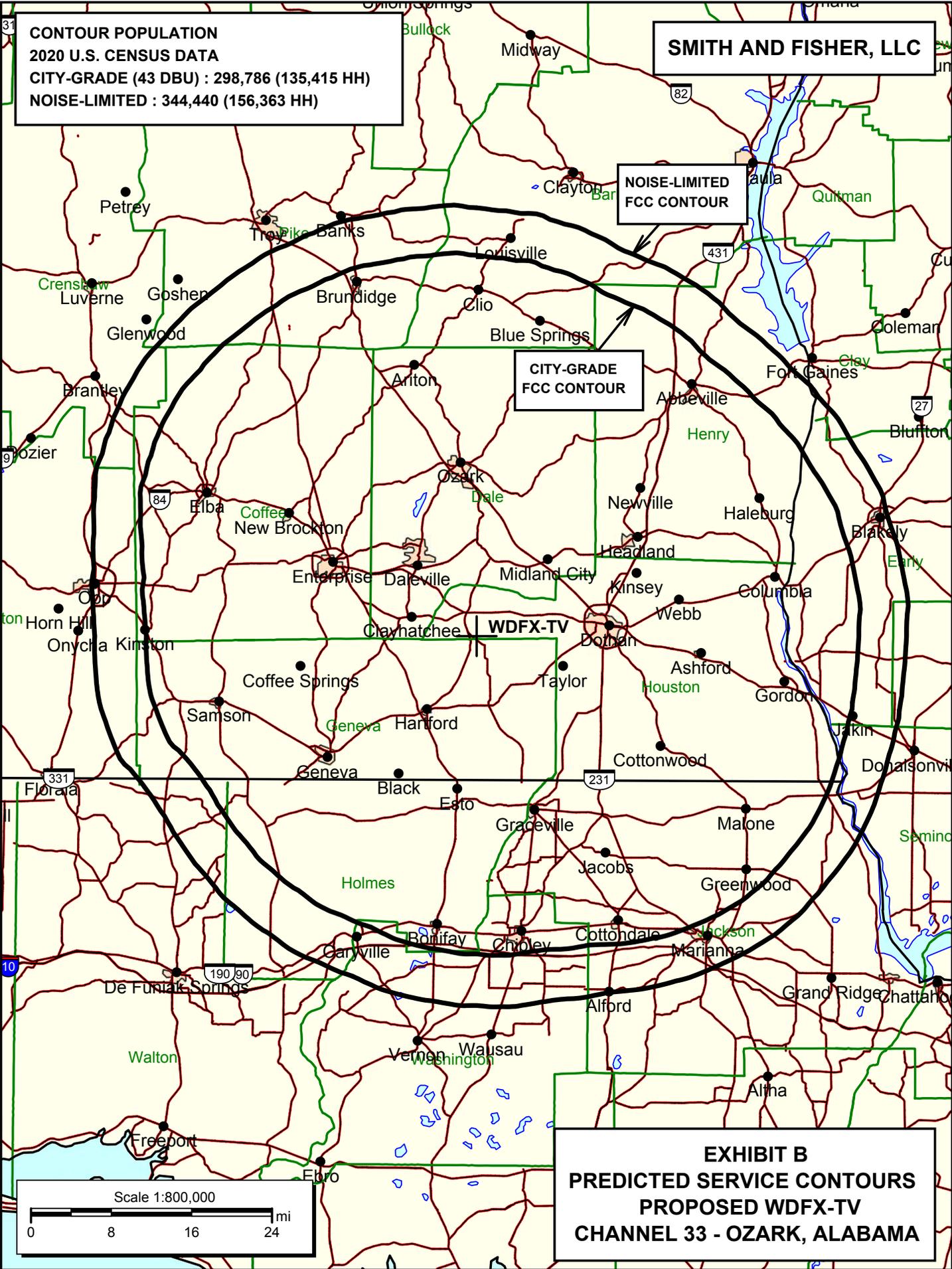
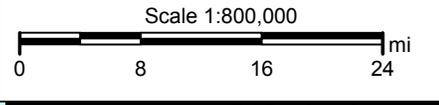
SMITH AND FISHER, LLC

**NOISE-LIMITED
FCC CONTOUR**

**CITY-GRADE
FCC CONTOUR**

WDFX-TV

**EXHIBIT B
PREDICTED SERVICE CONTOURS
PROPOSED WDFX-TV
CHANNEL 33 - OZARK, ALABAMA**



- Authorized CP (33)
- Proposed (33)
- Licensed (33)

SMITH AND FISHER, LLC

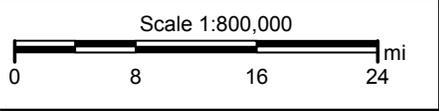
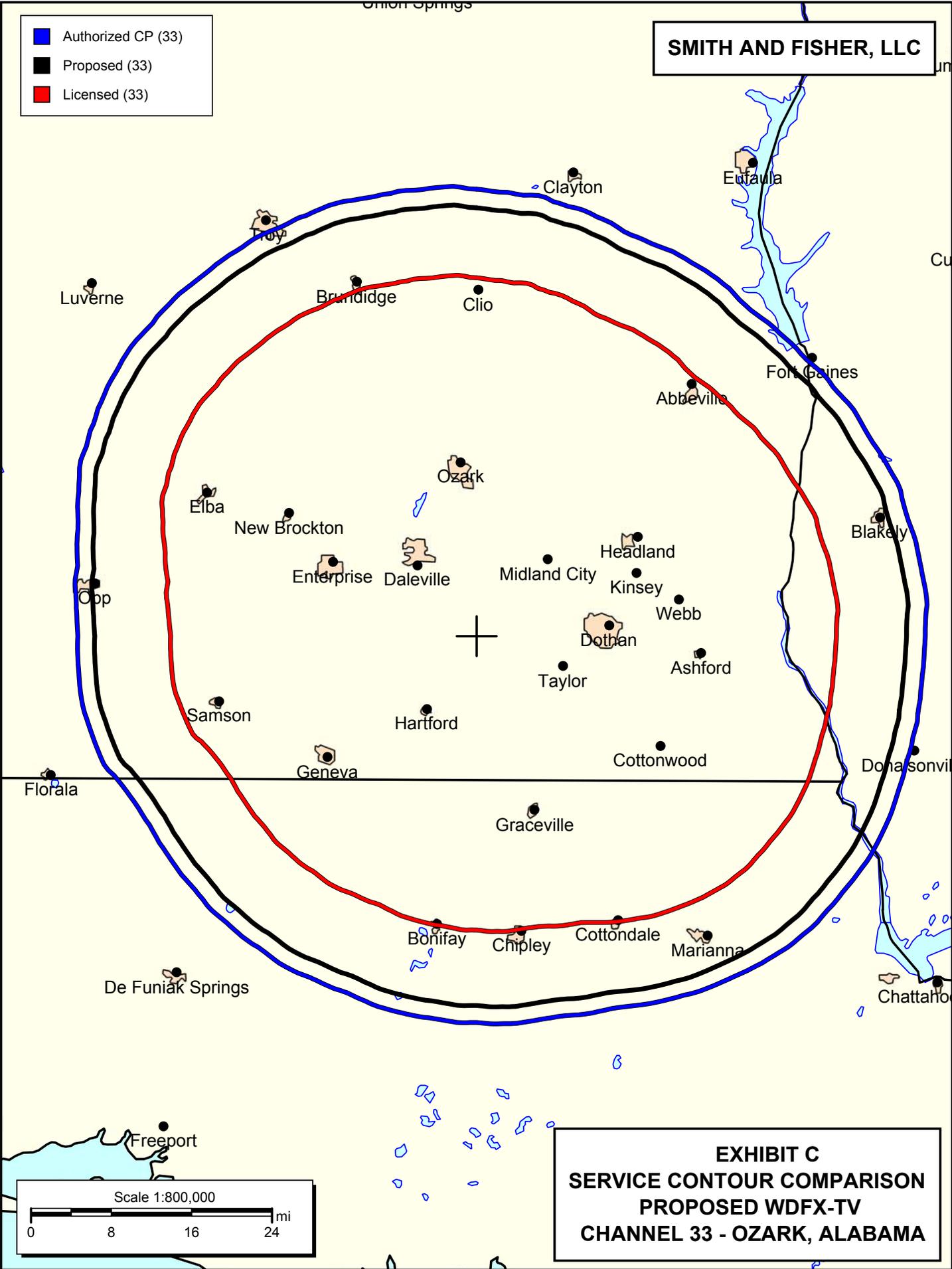


EXHIBIT C
SERVICE CONTOUR COMPARISON
PROPOSED WDFX-TV
CHANNEL 33 - OZARK, ALABAMA

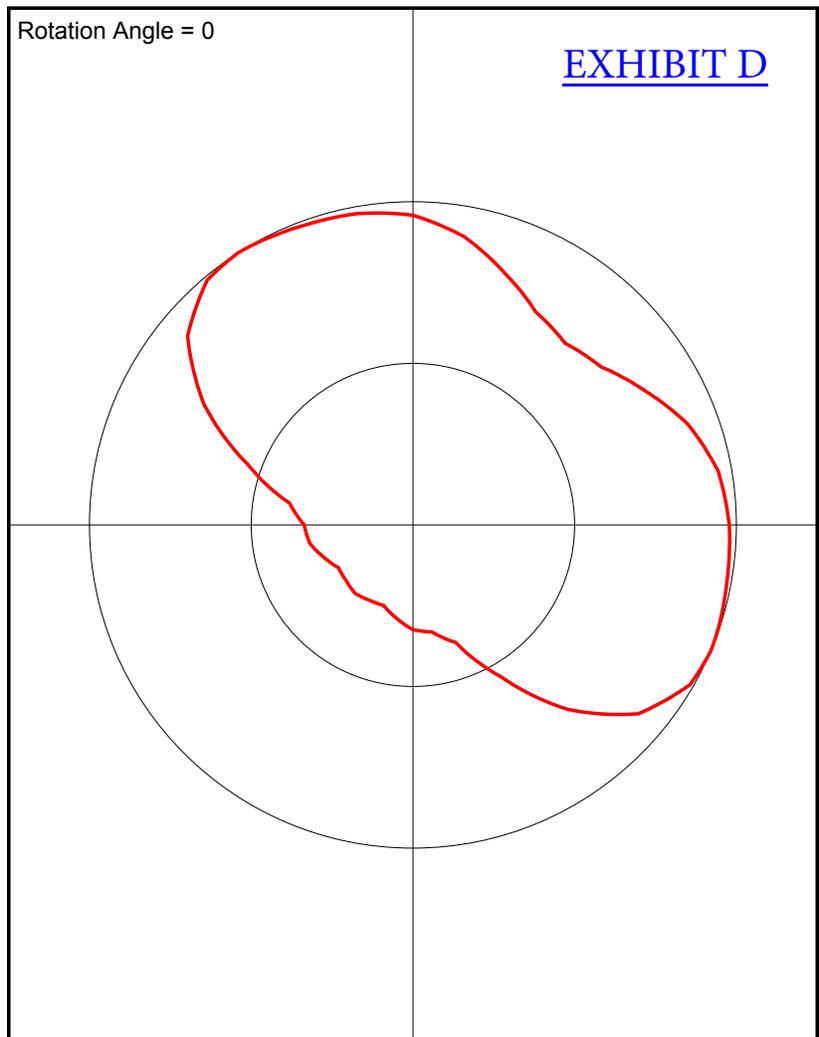
Antenna Pattern

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	0.958
10.0	0.906
20.0	0.829
30.0	0.76
40.0	0.733
50.0	0.76
60.0	0.829
70.0	0.906
80.0	0.958
90.0	0.978
100.0	0.986
110.0	0.998
113.0	1.0
120.0	0.989
130.0	0.909
140.0	0.745
150.0	0.541
160.0	0.387
170.0	0.336
180.0	0.324
190.0	0.293
200.0	0.265
210.0	0.269
220.0	0.277
230.0	0.269
240.0	0.265
250.0	0.293
260.0	0.324
270.0	0.336
280.0	0.387
290.0	0.541
300.0	0.745
310.0	0.909
320.0	0.989
327.0	1.0
330.0	0.998
340.0	0.986
350.0	0.978

Rotation Angle = 0

EXHIBIT D



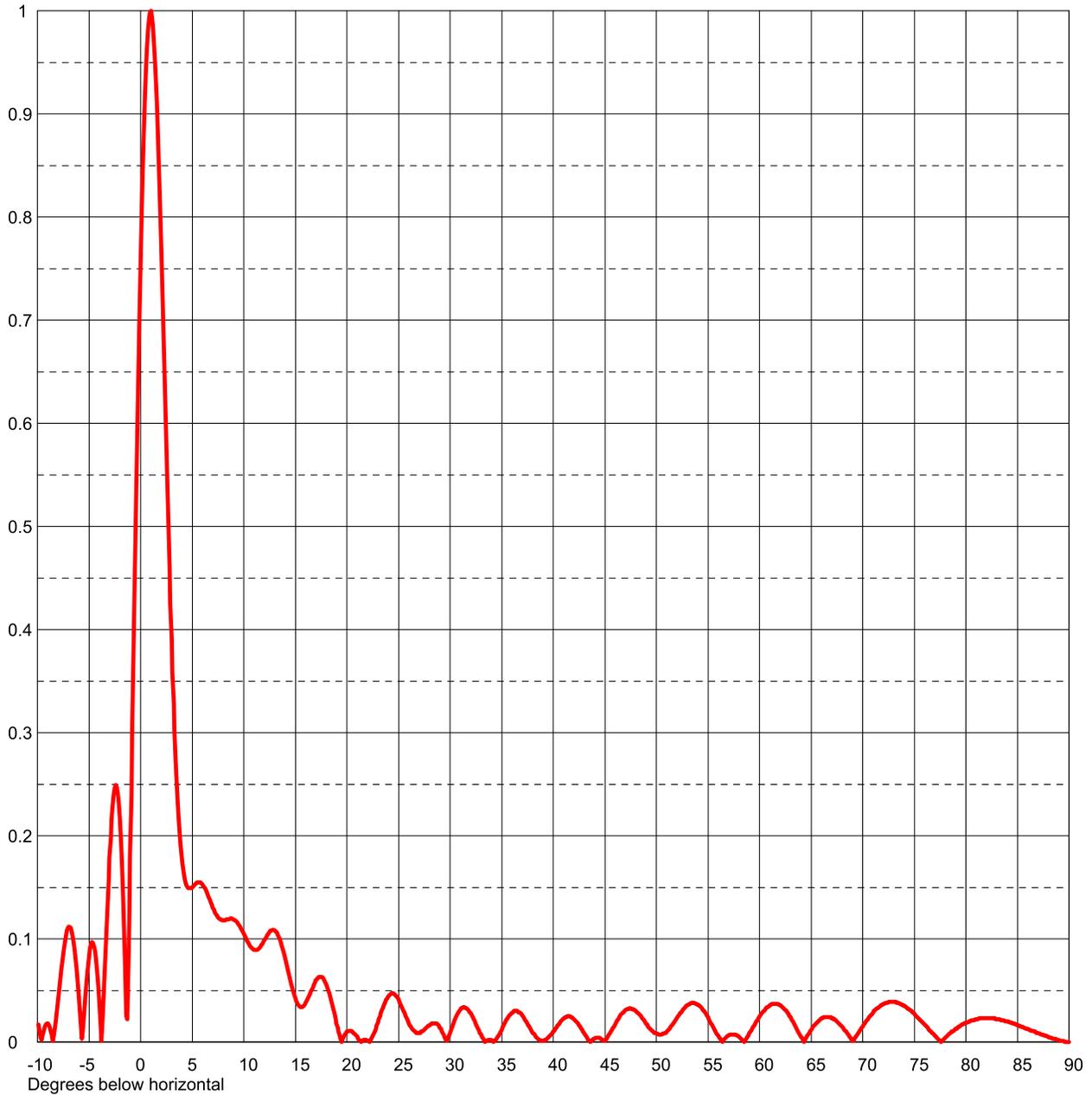


Date **19 Jun 2008**
Call Letters **WDFX-DT** Channel **33**
Location **Ozark, AL**
Customer
Antenna Type **TFU-28GTH-R**

EXHIBIT D

TYPICAL ELEVATION PATTERN

RMS Gain at Main Lobe	24.0 (13.80 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	13.6 (11.34 dB)	Frequency	587.00 MHz
Calculated / Measured	Calculated	Drawing #	28G240100-90



Remarks:

TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED WDFX-TV
CHANNEL 33 – OZARK, ALABAMA

Study created: 2023.01.11 08:50:33

Study build station data: LMS TV 2022-12-10

Proposal: WDFX-TV D33 DT CP OZARK, AL

File number: BLANK0000035653

Facility ID: 32851

Station data: User record

Record ID: 78

Country: U.S.

Zone: III

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WFSU-TV	D32	DT	LIC	TALLAHASSEE, FL	BLEDT20030730ACW	134.5 km
Yes	WPXH-TV	D33	DT	LIC	HOOVER, AL	BLANK0000105366	276.6
Yes	WPCT	D33	DT	LIC	PANAMA CITY BEACH, FL	BLANK0000062892	115.2
No	WIRE-CD	D33	DC	LIC	ATLANTA, GA	BLANK0000130086	305.5
Yes	WGNM	D33	DT	LIC	MACON, GA	BLANK0000113679	259.7
No	WPXL-TV	D33	DT	LIC	NEW ORLEANS, LA	BLANK0000105390	436.6
No	WBIH	D34	DT	LIC	SELMA, AL	BLANK0000110807	188.1
No	WHBR	D34	DT	LIC	PENSACOLA, FL	BLCDT20060627AAV	204.7
No	WSST-TV	D34	DT	LIC	CORDELE, GA	BLANK0000064103	187.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D33

Latitude: 31 12 28.80 N (NAD83)

Longitude: 85 36 48.80 W

Height AMSL: 228.0 m

SMITH AND FISHER

HAAT: 151.0 m

Peak ERP: 179 kW

Antenna: DIE-TFU-28ETT-R 4C190 DC (ID 68078) 0.0 deg

Elev Pattn: Generic

Elec Tilt: 0.90

40.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	164 kW	141.8 m	69.1 km
45.0	99.7	136.1	66.1
90.0	171	141.8	69.3
135.0	122	146.0	68.0
180.0	18.8	145.7	59.0
225.0	13.3	154.8	58.0
270.0	20.2	168.6	61.0
315.0	161	152.0	69.8

Database HAAT does not agree with computed HAAT

Database HAAT: 151 m Computed HAAT: 148 m

Distance to Canadian border: 1192.6 km

Distance to Mexican border: 1246.7 km

Conditions at FCC monitoring station: Powder Springs GA

Bearing: 15.5 degrees Distance: 306.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 304.7 degrees Distance: 2022.6 km

Study cell size: 2.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

No IX check failures found.

POWER DENSITY CALCULATION

PROPOSED WDFX-TV
CHANNEL 33 – OZARK, ALABAMA
[MODIFICATION OF LMS-0000182873]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Ozark facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 179 kW (H), an antenna radiation center 144.2 meters above ground, and the specific elevation pattern of the authorized Dielectric TFU-28ETT-R 4C190 DC antenna, maximum power density two meters above ground of $0.0.00043 \text{ mW/cm}^2$ is calculated to occur 43 meters east-southeast and north-northwest of the base of the tower. Since this value is only 0.1 percent of the 0.39 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 33 (584-590 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.